

The challenges for implementing the perioperative nursing process

Os desafios para a implementação do processo de enfermagem perioperatório

Los desafíos para implementar el proceso de enfermería perioperatoria

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ABSTRACT: Objective: To analyze the challenges of the perioperative nursing process in the surgicenter, identifying the facilities and difficulties in its implementation. **Method:** Descriptive research, with a mixed approach (quantitative and qualitative) and snowball sampling, encompassing 16 nurses. Data collection was through an online, self-administered and semi-structured form, containing 12 questions aimed at analyzing the development of the nursing process in the surgicenter. **Results:** The majority of participants reported that the nursing process was implemented in the institutions where they worked, half of them (n=8) found it easy to implement the nursing process, and all of them (n=16) stated that there are challenges in implementing it and cited staffing and lack of professional knowledge as difficulties. **Conclusion:** It was found that there is a gap in the sequencing of actions in the nursing process, and that the physical examination in the nursing consultation, the evolution in the immediate preoperative period and the reformulation of the planning of actions in the postoperative period are important practices that are not adhered to by the majority of nurses. Therefore, it is understood that they find more difficulties than facilities in implementing the nursing process.

Keywords: Nursing process. Surgicenters. Perioperative nursing. Operating room nursing.

RESUMO: Objetivo: Analisar os desafios do processo de enfermagem perioperatório no centro cirúrgico, identificando as facilidades e as dificuldades em sua implementação. **Método:** Pesquisa descritiva, com abordagem mista (quantitativa e qualitativa) e amostragem em bola de neve, englobando 16 enfermeiros. A coleta de dados foi por meio de um formulário online, autoaplicável e semiestruturado, contendo 12 perguntas voltadas para a análise do desenvolvimento do processo de enfermagem no centro cirúrgico. **Resultados:** A maioria dos participantes relatou que o processo de enfermagem era implementado nas instituições em que trabalhavam, metade (n=8) encontrou facilidades na implementação do processo de enfermagem, e todos (n=16) afirmaram que existem desafios para implementá-lo e citaram como dificuldades o dimensionamento de pessoal e a falta de conhecimento profissional. **Conclusão:** Constatou-se que existe uma lacuna no sequenciamento das ações do processo de enfermagem, e que o exame físico na consulta de enfermagem, a evolução no pré-operatório imediato e a reformulação do planejamento das ações no pós-operatório são práticas importantes que não são aderidas pela maioria dos enfermeiros. Logo, entende-se que eles encontram mais dificuldades do que facilidades para implementar o processo de enfermagem. **Palavras-chave:** Processo de enfermagem. Centro cirúrgico. Enfermagem perioperatória. Enfermagem de centro cirúrgico.

RESUMEN: Objetivo: Analizar los desafíos del proceso perioperatorio de enfermería en el centro quirúrgico, identificando las facilidades y dificultades en su implementación. **Método:** Investigación descriptiva, con enfoque mixto (cuantitativo y cualitativo) y muestreo en bola de nieve, englobando a 16 enfermeros. La recolección de datos se realizó a través de un formulario en línea, autoadministrado y semiestructurado, que contenía 12 preguntas orientadas a analizar el desarrollo del proceso de enfermería en el centro quirúrgico. **Resultados:** La mayoría de los participantes informaron que el proceso de enfermería fue implementado en las instituciones donde trabajaban, a la mitad (n=8) les resultó fácil implementar el proceso de enfermería y todos (n=16) afirmaron que existen desafíos para implementarlo, y citaron la dotación de personal y la falta de conocimientos profesionales como dificultades. **Conclusión:** Se encontró que existe un vacío en la secuenciación de acciones en el proceso de enfermería, y que el examen físico en la consulta de enfermería, la evolución en el preoperatorio inmediato y la reformulación de la planificación de acciones en el postoperatorio son prácticas importantes que no son seguidas por la mayoría de las enfermeras. Por lo tanto, se entiende que encuentran más dificultades que facilidades para implementar el proceso de enfermería.

Palabras clave: Proceso de enfermería. Centros quirúrgicos. Enfermería perioperatoria. Enfermería de quirófano.

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INTRODUCTION

The nursing process (NP) began in the United States of America in 1950 and was followed by Brazilian nursing. NP was used in theoretical and practical reflections by Wanda Aguiar Horta in Brazil only in 1970. To introduce it in the country, she carried out missions in different cities and health regions, encountering several difficulties. Therefore, it was only at the end of the 1980s that actions linked to NP began to be supported in Brazil, through professional nursing legislation in the regulation of prescriptions and nursing consultations as exclusive nursing attributions¹.

In the early 2000s, the Federal Nursing Council (*Conselho Federal de Enfermagem* – COFEN) published Resolution No. 272/2002, introducing the term “Nursing Care Systematization” (*Sistematização da Assistência de Enfermagem* – SAE), in addition to NP. However, this resolution pointed out that SAE should be recorded in the client’s medical record in accordance with the NP steps, but did not conceptualize them; therefore, it was revoked and replaced by Resolution No. 358/2009, which sought to clarify the difference between SAE and PE¹. It is noteworthy that the Perioperative Nursing Care Systematization (*Sistematização da Assistência de Enfermagem Perioperatória* – SAEP) was proposed before the COFEN Resolution. Castellanos and Jouclas, in 1990, recommended the use of EP in the care of surgical patients². NP guides the care and documentation of professional nursing practice, favoring, among other things, patient safety, and when applied to perioperative care, it favors safe surgery. It must be carried out deliberately and systematically, in all health institutions, public or private, where nursing professionals provide care².

According to the latest regulations published by COFEN — Resolution No. 358/2009³ —, NP is made up of five stages: data collection, nursing diagnosis, care planning, implementation, and nursing assessment²⁻⁴.

Nurses are responsible for leading the execution and evaluation of NP, being exclusively responsible for the steps of: nursing diagnoses (where altered responses are identified), nursing care planning (with establishment of expected results), and formulation of interventions to be carried out by the nursing team. Technicians and nursing assistants are responsible for participating in NP, in whatever is their responsibility, under the supervision and guidance of nurses^{3,5}.

In this sense, it is understood that NP has the purpose of improving the quality of care provided to patients, promoting

continued, participatory, individualized, and documented care, seeking effective communication and safe care^{6,7}.

In surgicenters (SC), NP also promotes the interaction of perioperative care, which covers the preoperative, transoperative, and postoperative periods, enabling the organization of care at each moment of operative care².

It is noteworthy, therefore, that the object of this study is the implementation of NP in SC, with the following guiding questions: “What are the challenges that nurses face when implementing NP in SC?” and “What are the advantages and difficulties during the implementation of NP?”.

Furthermore, this study is relevant due to its aim to contribute to the nursing team’s reflection on the importance of perioperative NP, its challenges, facilities, and difficulties, in addition to contributing to new studies in the academic area.

OBJECTIVE

To analyze the challenges of perioperative NP in SC, identifying the facilities and difficulties in its implementation.

METHOD

This is a descriptive field study, with a mixed approach (quantitative and qualitative). Its sampling followed the “snowball” methodology⁸; 16 nurses who work in the SC of public and private hospitals in the state of Rio de Janeiro participated in the research.

Inclusion criteria were a minimum of 1 year of experience in SC, and exclusion criteria were: nurses who reported no internet access and those who, at any time, withdrew their consent to participate in the research.

Data collection initially took place from the researcher’s network of contacts, from which five nurses were selected. After analyzing the Lattes CV, an invitation containing the link to participate in the research was sent via social media or email. Thus, the first participants indicated new contacts and so on, making it possible to reach potential participants.

As a tool for data collection, a self-administered and semi-structured online questionnaire was developed, consisting of 12 questions aimed at analyzing the development of NP in SC, in addition to the presence of a space for participants to make comments on the topic. Data collection took place from August to October 2022.

The analysis of quantitative data occurred in a descriptive way, with data presented by frequency and absolute number.

Data were tabulated in Excel, coded and organized in ascending order, using sum and percentage to describe them.

A qualitative analysis of the content obtained was carried out using the Laurence Bardin technique, which aims to present a critical assessment of the information collected. Therefore, content analysis was carried out in three stages: pre-analysis, exploration of the material, and treatment of the results obtained⁹.

To guarantee the anonymity of the participants, identification was organized by the letter P, which means “participant”, followed by the Arabic numerals of the order of the interviews (P1, P2, P3...). Results are presented according to the analysis categories; data interpretation was corroborated with current literature⁹.

The research project was approved by the Research Ethics Committee of the proposing institution, via *Plataforma Brasil*, under Certificate of Presentation of Ethical Appreciation (*Certificado de Apresentação de Apreciação Ética – CAAE*) 59332022.6.0000.5285, in accordance with Resolution of the National Health Council No. 466/2012, which regulates research involving human beings. Furthermore, the Informed Consent was inserted in the online questionnaire and signed virtually when the professionals agreed to participate in the research — a link was made available for them to download the term.

RESULTS

Of the 16 nurses who participated in the study, there was a prevalence of females (93.7%), older than 40 years (68.8%),

and with at least 5 years of professional training (81.3%). With regard to work in SC, it was observed that 43.8% had more than 12 years of experience in perioperative nursing, 56.3% had only one employment relationship, and 68.8% only performed day shifts.

The majority of nurses interviewed reported having knowledge about NP (87.4%) and considered it important for nursing actions in SC (93.7%). However, only 68.8% reported knowing all its stages, and 62.5% stated that NP was implemented in SC of the institutions in which they work.

Regarding the nurse’s duties in the immediate preoperative, intraoperative, and immediate postoperative periods, several actions were listed so that interviewees could select those that SC nurses at the institutions in which they work perform.

In the immediate preoperative period, nine activities were listed. It is noteworthy that only half of the interviewees identified the patient’s clinical problems and prepared nursing diagnoses, and less than half carried out physical examinations, as shown in Table 1.

During the operation, seven activities were listed, and almost all nurses interviewed stated that they checked the patients’ identification and surgical record upon admission to the SC, as shown in Table 2.

In the immediate postoperative period, the majority reported that they work in post-anesthesia recovery (PAR) and records the patients’ progress in the medical record; however, less than half of the nurses carried out action planning and expected nursing results, as described in Table 3.

Table 1. Number of nurses who carry out activities in the pre-operative and immediate intra-operative period.

Immediate preoperative phase	
Activities	Number of nurses (%)
Verifying signature of consent forms for surgery and anesthesia	93.7
Completing the safe surgery checklist	93.7
Checking blood reserve at the blood center	93.7
Checking whether there was a surgical risk in the medical record	87.4
Checking available space at the ICU, depending on the type of surgery	81.3
Collecting patient history	81.3
Registering progress in the medical record	68.8
Identifying patients’ clinical problems	50
Formulating nursing diagnoses	50
Performing physical examination	43.8

ICU: intensive care unit.

Table 2. Number of nurses who carry out activities in the immediate and mediate intra-operative period.

Intraoperative phase	
Activities	Number of nurses (%)
Checking the patients' identification and surgical record upon admission to the SC	93.7
Preparing and forwarding anatomical specimens and exams	75
Escorting patients to the operating room	68.8
Completing the safe surgery checklist before anesthetic induction	68.8
Assessing patients' physical and emotional states	62.5
Performing catheterizations, when necessary	62.5
Assisting with proper positioning of the patient on the operating table	56.6

SC: surgicenter.

Table 3. Number of nurses who carry out activities in the immediate post-operative period.

Immediate postoperative phase	
Activities	Number of nurses (%)
Working at PAR	87.4
Registering patients' evolution in the medical record	81.3
Carrying out nursing interventions	75
Completing the Aldret, Kroulik scales and the analogue pain scale	68.8
Redoing nursing diagnoses and assessments	56.3
Reformulating action planning	43.8

PAR: post-anesthesia recovery.

The majority of nurses stated that there is standardization of NP in the SC of the institutions in which they work (87.4%) and they all considered that there were challenges in the routine of the nursing team in implementing and executing NP. However, half of those interviewed believe that nurses find it easy to implement NP; Therefore, the analyzed results were classified into two categories, facilities and difficulties, followed by five subcategories.

Category 1: Facilities for implementing the nursing process

The nurses in the study understand that institutional standardization ends up facilitating the process.

"There is a sequence of steps to be followed, it is easy to implement as B is not carried out until A is completed." (P9)

"Team awareness and standardization of activities." (P3)

"Upon receiving the elective patient, we immediately check the data and fill out the forms dynamically without any difficulty." (P13)

"Yes, it is a well-implemented routine in the sector, where everyone puts it into practice without any difficulty or questioning." (P14)

"Nurses do not find it easy, as it is a human-dependent process." (P6)

"There is no facility, the unit and team need to be organized." (P5)

Category 2: Difficulties in implementing the nursing process

Subcategory 2.1: Inadequate nursing staff sizing

Inadequate nursing staff sizing was described by participating nurses as a difficulty in implementing NP.

“Challenge: [...] Human resources...” (P2)

“Challenge: the number of clinical nurses.” (P4)

“The difficulties are adequate sizing of nurses for the surgical center that allows professionals to perform SAEP, resistance to the processes of recording the stages of the Nursing Process...” (P12)

“When there is a lack of staff and the nurse is alone and has to take on more than one role, NP is hindered.” (P13)

Subcategory 2.2: Lack of knowledge about the nursing process

Participants pointed out that the nursing team’s lack of knowledge about NP makes its implementation difficult.

“The lack of training of professionals, structure in the organization, resources, unit routine, lack of mastery of SAE, planning.” (P11).

“[...]lack of knowledge about Nursing Diagnoses.” (P12)

“Difficulty: understanding the subject.” (P7)

“[...] difficulty in training.” (P3)

Subcategory 2.3: Nursing Overload

“The various pending issues that we receive from other sectors, in an emergency surgery to which SAEP is weakened, so the steps are carried out in a different way before the patient leaves the sector so that there are no pending issues.” (P6)

“When [...] the nurse is alone, having to take on more than one role and at times the surgical volume is changed due to the reception of Urgent Care and emergencies. Agility must be activated in ‘TURBO mode’ so that you don’t miss out on assistance.” (P13)

Subcategory 2.4: Low adherence to the nursing process by the nursing team

Some nurses reported poor adherence as a difficulty in implementing NP, as in the following statements.

“Challenge: Team buy-in...” (P2)

“Team adherence...” (P10)

Subcategory 2.5: Inadequacy of the hospital organizational structure

The hospital’s organizational structure was also described by participants as having a negative relevance for the implementation of NP.

“Difficulty: Structure.” (P8)

“[...] structure in the organization, resources, and routine of the unit...” (P10)

DISCUSSION

Although there is a growing trend of males in nursing, the results reveal a predominance of females in research and in the profession¹⁰. Regarding age range, those over 30 years old prevailed; and regarding training time, there was a prevalence of cases lasting more than 10 years, which may indicate certain professional experience and a greater need for updates¹¹⁻¹³.

Day shifts prevailed among participants, increasing the risk of damage related to the work shift, as elective surgeries occur during day shifts (from 7 a.m. to 7 p.m.) on weekdays (Monday to Friday), and at other times and days of the week, the SC operates exclusively for emergency surgeries, with minimal teams and professionals on call¹⁴.

The majority of nurses who participated in this research reported having knowledge about NP, its stages, in addition to considering it important for nursing actions in SC; they also reported that it is implemented in the sector in which they work, agreeing with other research^{4,7} in which nurses understood the importance and need to carry out NP in care practices. However, other studies^{6,15} emphasize that there is a lack of knowledge about NP in SC and a lack of training on the subject, in addition to highlighting that, in most Brazilian states, health institutions still do not adhere to the implementation of NP, due to the many difficulties arising from its implementation. Hence the relevance of this research, as it helps to understand the difficulties and facilities that nurses face when implementing NP in SC.

Although most people say they know the stages of NP, it is necessary to highlight them so that the actions in each phase can be understood, and thus nurses can carry them out correctly. Therefore, perioperative NP encompasses five phases: preoperative nursing consultation or visit, perioperative

care planning, implementation, evaluation of care through post-operative nursing visit or teleconsultation and reformulation of the care to be planned, according to results obtained and resolving unwanted situations or occurrence of adverse events. Furthermore, it is worth highlighting that the perioperative period is made up of the following periods: immediate preoperative, transoperative, intraoperative, and postoperative (immediate and mediate)².

The immediate preoperative period comprises the 24 hours preceding the anesthetic-surgical procedure and extends until the patient is referred to the SC, unless the patient has undergone some type of preoperative process, months or weeks before, for example, a specific dietary regimen. During this period, specific preparations for surgery are carried out, and nurses must complete the nursing history, using anamnesis, physical examination and direct observation, in addition to formulating diagnoses, nursing results and prescriptions for the transoperative period².

At this stage, more than half of the participants stated that they registered progress on the patients' medical record, and half identified the patients' real and potential problems and formulated nursing diagnoses; however, only 43.8% of respondents perform a physical examination on the patient.

The physical examination aims to investigate signs and symptoms through interpretation, observing relevant points and abnormalities according to inspection, palpation, percussion, and auscultation techniques. Poor execution may be related to a lack of knowledge about the physical examination and to a lack of time due to work overload, interfering with NP and, consequently, patient care¹⁶.

The transoperative period begins from the moment patients are admitted to SC until they leave the operating room. During this period, nurses receive patients at the SC, checks their identification data, the use and completion of the safe surgery checklist, and prepare the nursing prescription, with evaluation and evolution, for example. It should be noted that the intraoperative period is part of the transoperative period, beginning with the anesthetic-surgical act and ending with the end of the procedure².

The majority of nurses carried out the actions in this phase, including checking the patients' identification and surgical record, and completing the safe surgery checklist before anesthetic induction, performing catheterization when necessary and forwarding anatomical specimens and exams, demonstrating good adherence at this stage, despite the difficulties.

There is also the postoperative period, which comprises the entire period after the anesthetic-surgical procedure. It is classified as immediate post-operative (occurs within the first 24 hours after the anesthetic-surgical intervention, with a post-operative visit being recommended by the SC nurse to assess the assistance provided in the perioperative period) and mediate, which begins after the first 24 hours of surgery (its duration varies according to the procedure performed and nurses participate in evaluating the patient and preparing the care plan until discharge)².

In this phase, work in PAR prevails, as well as progress in the medical record, carrying out nursing interventions, filling out the Aldret and Kroulik scales, and the analogue pain scale, reformulating diagnoses and nursing assessment. Less than half of the nurses reformulated their action planning.

It is noteworthy that it is in the post-operative period that the nursing team needs to be prepared for possible complications that may occur to the patient. Therefore, it is essential that nurses have a global view of patients through the phases that make up NP, including planning actions and expected nursing results, to try to prevent or reduce possible damage resulting from surgery¹⁷.

Regarding the facilities for implementing NP, half of the participants believed that there were facilitating factors and cited the standardization of the steps that become routine and the sensitivity of nurses about the importance of implementing them. Some authors¹³ cite as facilitating instruments those that allow the analysis of records of information about the patient, but some of them are ineffective, as they catalog all the information about the patients' conditions, which demonstrates the need for standardization of established data collect instruments among the country's health institutions. Other authors^{6,18} highlight the use of technologies and the empowerment of nursing professionals during the implementation of NP.

However, all professionals stated that there are challenges to implementing NP, mentioning insufficient human resources, which cause nurses to have excessive duties, and a lack of materials, causing them to fail to carry out their duties to help other professionals, resulting in lack of time to carry out the records, which leads them to believe that NP is not a priority^{4,19}. Studies indicate the need to invest in the academic training of nursing professionals and to promote training and qualifications of health professionals to improve the nursing process^{4,13,19}. Another highlight is work overload, which is related to the lack of human resources and high demand for work; For this reason, some authors recommend

reworking the work schedule and raising awareness among the team to prepare care, according to NP⁴.

Low adherence to NP was cited by interviewees, a factor associated with little update on the topic by professionals, lack of encouragement from the institution, and demotivation^{4,13}. The organizational structure was also considered by the interviewees, as it directly interferes with the quality of the work process. Studies highlight the importance of standardizing documents, nursing records, and organizing complementary information so that effective communication, time optimization, and implementation of NP can occur^{13,15,19}.

In addition to the challenges presented in this research, some studies^{15,19} cite the lack of knowledge about the physical examination and the lack of credibility in nursing prescriptions.

Study limitations

This research is limited by the lack of sampling with regional characterizations, due to the snowball methodology. Caution is advised in generalizing the results found here and future studies in specific health units are recommended to identify the peculiarities of each region.

The lack of knowledge about NP was widespread in the participants' speech, thus generating the need for more health education activities, to strengthen professionals' adherence, in addition to being an interesting topic for new studies.

CONCLUSION

This study allowed us to understand the challenges that nurses face when implementing NP in SC, revealing that not all stages of this process are carried out in the respective perioperative phases. It was found that there is a gap in the sequencing of NP actions and that the physical examination, at the time of the nursing consultation, the evolution in the immediate preoperative period, and the reformulation of the evaluation

of nursing actions in the postoperative period are important practices that are not adhered to by the majority of nurses.

However, it can be understood that nurses encounter more difficulties than ease in implementing the process and that there is a need to carry out all stages of NP to contribute to quality health care.

Furthermore, it was evident that the findings of this study corroborate studies that point to the relevant role of continuing education in health services when implementing teaching strategies that favor professional training and the improvement of quality indicators.

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CONFLICT OF INTERESTS

The authors declare no conflicts of interests.

AUTHORS' CONTRIBUTIONS

LMGS: Project administration, Formal analysis, Conceptualization, Data curation, Investigation, Methodology, Resources, Writing – original draft, Writing – review & editing, Software, Supervision, Validation, Visualization. ACSP: Project administration, Formal analysis, Conceptualization, Data curation, Investigation, Methodology, Resources, Writing – review & editing, Software, Supervision, Validation, Visualization. NCMS: Formal analysis, Data curation, Methodology, Writing – review & editing, Software, Supervision, Validation, Visualization. LMLD: Formal analysis, Data curation, Methodology, Writing – review & editing, Software, Supervision, Validation, Visualization. BNOH: Methodology, Writing – review & editing, Supervision, Visualization.

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